UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,212	10/31/2003	Sunay Tripathi	20910/0206210-US0	1500

62663　　7590　　07/30/2007		

Sun Microsystems, Inc.
c/o DARBY & DARBY P.C.
P.O. BOX 770
Church Street Station
NEW YORK, NY 10008-0770

EXAMINER
TIV, BACKHEAN

ART UNIT	PAPER NUMBER
2151	

MAIL DATE	DELIVERY MODE
07/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/698,212	TRIPATHI ET AL.
	Examiner	Art Unit	
	Backhean Tiv	2151	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 01 January 1956.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-56 is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-56 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 31 October 2003 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date 10/04.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

Claims 1-56 are pending in this application.

Information Disclosure Statement

The IDS filed on 10/07/04 has been considered.

Drawings

The drawings are objected to because Fig.2, element 220 contains a written word that is not legible . Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Include the US Patent Application No. for all related cases, page 1, of the

specification.

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.   A nonstatutory
obviousness-type double patenting rejection is appropriate where the conflicting claims
are not identical, but at least one examined application claim is not patentably distinct
from the reference claim(s) because the examined application claim is either anticipated
by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140
F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29
USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.
1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422
F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163
USPQ 644 (CCPA 1969).
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d)
may be used to overcome an actual or provisional rejection based on a nonstatutory
double patenting ground provided the conflicting application or patent either is shown to
be commonly owned with this application, or claims an invention made as a result of
activities undertaken within the scope of a joint research agreement.
Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

Claims 1,3,4,12,15,29,30,31,32,33,34,43 are provisionally rejected on the ground

of nonstatutory obviousness-type double patenting as being unpatentable over claims

1,3,4,14,15,30,38,46,47 of copending Application No. 10/698,168. Although the

conflicting claims are not identical, they are not patentably distinct from each other

because claims 1,3,4,14,15,30,38,46,47 of copending Application No. 10/698,168

teaches all the limitations of claims 1,3,4,12,15,30,31,32,33,34,43. The difference

between the present and co-pending application is that the copending application

specifies what the two network protocol stacks are, one being a software network protocol stack and the other being a hardware network protocol stack. The present application merely recites, "a first network protocol stack" and "a second network protocol stack".

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to use a specific type of network protocol stack, software and hardware, as taught by copending application 10/698,168 instead of, "a first network protocol stack" and "a second network protocol stack".

As per claim 29 of the present application, recites the two protocol stack as being an operating system and a network interface card. Claim 1 of copending application 10/698,168 teaches the two protocol stacks being software and hardware. An operating system is a form of software and a network interface card is a form of hardware as it is well known to one ordinary skill in the art at the time of the invention , therefore claim 1 of copending application 10/698,168 teaches all the limitations of claim 29.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

Claims 1-24,27-52,55-56 are rejected under 35 U.S.C. 102(e) as being

anticipated by US Patent 6,697,868 issued to Craft et al(Craft).

As per claims 1, 29, 30, 31, 32, Craft teaches a method of processing a network

connection in a computer system(Abstract), comprising: establishing the network

connection by an operating system of the computer system(col.3, lines 23-26);

determining whether to offload the network connection from the operating system to a

network interface card(Abstract, Figs.4-7); and transferring the network connection from

the operating system to the network interface card when it is determined to offload the

network connection from the operating system to the network interface card(col.5, lines

35-55, Figs.4-7).

As per claim 2, the method as recited in claim 1, further comprising: sharing state

information associated with the network connection between the first network protocol

stack and the second network protocol stack(col.4, lines 16-40, Fig.2).

As per claim 3, the method as recited in claim 1, wherein determining whether to

offload the network connection is performed by an operating system kernel of the

computer system(Fig.2, col.5, lines 35-55).

As per claim 4, the method as recited in claim 3, wherein determining whether to

offload the network connection is performed by a socket layer of the operating system

kernel(Fig.2, col.5, lines 35-55).

As per claim 5, the method as recited in claim 1, wherein determining whether to offload the network connection is performed by the first network protocol stack(Fig.2, col.5, lines 35-55).

As per claims 6, 7,14,34,42, The method as recited in claim 1, wherein the first network protocol stack is implemented in software and the second network protocol stack is implemented in hardware(Abstract, Fig.2, col.5, lines 35-55).

As per claims 8,15, 35,43, the method as recited in claim 6, wherein the hardware is a TOE capable NIC(Abstract, col.3, lines 1-21).

As per claims 9, 36, wherein the second network protocol stack is capable of determining whether to offload the network connection back to the first network protocol stack(Fig.7, col.10, lines 10-30).

As per claims 10,37, further comprising: receiving an indicator from the second network protocol stack or a driver associated with the second network protocol stack, the indicator indicating a request to transfer the network connection back to the first network protocol stack(col.8, lines 30-57, (Fig.7, col.10, lines 10-30).

As per claims 11,38, further comprising: obtaining state information for the network connection from the second network protocol stack or the driver associated with the second network protocol stack when the indicator is received; and handling the network connection by the first network protocol stack using the obtained state information((Fig.7, col.10, lines 10-30).

As per claim 12, the method as recited in claim 11, wherein obtaining state

information is performed by a TCP layer of the first network protocol stack(col.10, lines

40-56).

As per claims 13,40, further comprising: obtaining at least one of unsent and

undelivered data by the first network protocol stack from the second network protocol

stack or a driver associated with the second network protocol stack, thereby enabling

the first network protocol stack to process the unsent or undelivered data(Fig.7, col.10,

lines 57-col.11, lines 47).

As per claims 16,44, wherein the network connection is a TCP connection(col.10,

lines 40-56).

As per claims 17,45, further comprising: handling the network connection by the

first network protocol stack when the network connection is offloaded back to the first

network protocol stack from the second network protocol stack(Fig.7, col.10, lines 10-

col.11, lines 47).

As per claims 18, 46, further comprising: handling the network connection by the

first network protocol stack until it is determined to offload the network connection to the

second network protocol stack(Fig.7, col.10, lines 10-col.11, lines 47).

As per claims 19,47, further comprising: handling the network connection by the

first network protocol stack until it is determined to offload the network connection to the

second network protocol stack(Abstract, col.3, lines 1-22).

As per claims 20,49, further comprising: providing state information associated

with the first network protocol stack to the second network protocol stack when it is

determined to offload the network connection from the first network protocol stack to the second network protocol stack(col.5, lines 55-col.6, line 41).

As per claim 21, the method as recited in claim 1, further comprising: establishing a mapping between a first set of state information for the network connection maintained by or associated with the first network protocol stack and a second set of state information for the network connection maintained by or associated with the second network protocol stack(col.5, lines 55-col.6, line 41, col.7, lines 31-52).

As per claim 22, the method as recited in claim 1, wherein transferring the network connection from the first network protocol stack to the second network protocol stack comprises: exchanging state information for the network connection between the first network protocol stack and the second network protocol stack(col.5, lines 55-col.6, lines7).

As per claim 23, the method as recited in claim 22, wherein exchanging state information comprises: exchanging a first identifier for the network connection maintained by the first network protocol stack with a second identifier for the network connection maintained by the second network protocol stack(col.7, lines 31-53).

As per claim 24,52, wherein the state information comprises IP addresses and ports for a client and server of the network connection, and at least one of send and receive sequence numbers of one or more packets for the network connection(claim 1, col.6, lines 7-15).

As per claims 27,55, wherein transferring the network connection from the first network protocol stack to the second network protocol stack comprises: initiating the

transfer of the network connection by a socket layer of the computer system(col.6, lines 7-30).

As per claims 28,56, wherein upon transferring the network connection from the first network protocol stack to the second network protocol stack, the method further comprising: at least one of sending one or more packets by the second network protocol stack to the socket layer and receiving one or more packets by the second network protocol stack from the socket layer(col.5, lines 55-col.6, lines 41).

As per claim 33, the network device as recited in claim 32, wherein the first network protocol stack is a TCP/IP stack and the second network protocol stack is a TCP/IP stack(col.12, lines 6-20).

As per claim 39, the network device as recited in claim 38, wherein a TCP layer of the first network protocol stack is adapted for obtaining the state information for the network connection from the second network protocol stack or the driver associated with the second network protocol stack(col.5, lines 55-67, col.7, lines 31-53).

As per claim 41, the network device as recited in claim 38, wherein the indicator is received from the second network protocol stack or a driver associated with the second network protocol stack(col.7, lines 31-53).

As per claim 48, the network device as recited in claim 32, wherein the operating system is configured to establish a mapping between a first set of state information for the network connection associated with the first network protocol stack and a second set of state information for the network connection associated with the second network protocol stack(col.12, lines 6-45).

As per claim 50, the network device as recited in claim 32, wherein the operating

system is configured to at least one of provide state information associated with the first

network protocol stack and obtain state information associated with the second network

protocol stack(col.12, lines 6-45).

As per claim 51, the network device as recited in claim 50, wherein the state

information comprises an identifier for the network connection(col.6, lines 7-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 25,26,53,54 are rejected under 35 U.S.C. 103(a) as being unpatentable

over US Patent 6,697,868 issued to Craft et al(Craft) in view of US Patent 6,622,72

issued to Tam.

Craft teaches all the limitations of claim 24 and 52, however does not explicitly

teach as per claims 25,53, wherein the state information further comprises: a round trip

estimate.

Tam teaches wherein the state information further comprises: a round trip

estimate(col.10, lines 17-44).

Therefore it would have been obvious to one ordinary skill in the art at the time of

the invention to modify the teachings of Craft to include a round trip estimate as taught

by Tam in order to avoid delays of transmission or congestion in a network(Tam, col.7, lines 17-31).

One ordinary skill in the art at the time of the invention would have been motivated to combine the teachings of Craft and Tam in order to provide a system to reduce bursty transmission of network connections between computers in a network(Tam, col.7, lines 27-30).

As per claims 26,54, wherein the state information further comprises: a congestion window and slow start information(Tam, col.7, lines 17-31). Motivation to combine set forth in claim 25.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Backhean Tiv whose telephone number is (571) 272-5654. The examiner can normally be reached on M-F 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Wallace can be reached on (571) 272-3440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Backhean Tiv
2151
7/18/07